

TWO NEW SPECIES OF *PARASCOLOPSIS* (PISCES: NEMIPTERIDAE) FROM NORTH-WESTERN AUSTRALIA, INDONESIA AND THE PHILIPPINES

B.C. RUSSELL

Northern Territory Museum of Arts and Sciences,
GPO Box 4646, Darwin, NT 5794, Australia.

ABSTRACT

Two new species of dwarf monocle-brems of the genus *Parascolopsis* Boulenger are described. *P. rufomaculatus* sp. nov. is characterised by having a prominent red spot between the eighth and tenth dorsal spines. The colour pattern of *P. rufomaculatus* closely resembles that of *P. boesemani* (Manikyal Rao and Srinivasa Rao), but is separable from the latter in having a slightly deeper body and shorter pectoral and pelvic fins (not reaching beyond level of vent). *P. rufomaculatus* occurs in depths of 210-320 m and is known thus far only from specimens collected from north-western Australia. *P. tanyactis* sp. nov. is distinguished from all other species of *Parascolopsis* by having the 4th or 5th dorsal rays notably elongated, at least in larger specimens. *P. tanyactis* appears close to *P. inermis* (Schlegel) but differs in the aforementioned character and also in having a dusky band across the snout joining the eyes through the nostrils. *P. tanyactis* occurs in depths of 45-180 m and is described from specimens collected from north-western Australia, Indonesia and the Philippines.

KEYWORDS: taxonomy, Nemipteridae, *Parascolopsis*, north-western Australia, Indonesia, Philippines, new species.

INTRODUCTION

The dwarf monocle-brems of the genus *Parascolopsis* Boulenger are widely distributed throughout the tropical Indo-West Pacific region. The group comprises some 7 nominal species, most of which are small (<20 cm SL) bottom-living fishes, and inhabit mid to outer-shelf waters, usually in depths of 40-400 m. The genus can be distinguished from the closely related *Scolopsis* Cuvier by having a very reduced suborbital spine (absent in some species), and by differences in jaw structure, development of the infraorbital bones, number of epipleural ribs, and degree of development of the second anal spine (Russell and Gloerfelt-Tarp 1984).

Recent exploratory trawling surveys on the continental shelf of north-western Australia carried out by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) have yielded two new species of *Parascolopsis*. These undescribed species, included by Sainsbury *et al.* (1985) in their illustrated guide to the continental shelf fishes of northern and north-western Australia, are described herein as new. One of the new species is known only from specimens collected from north-western

Australia; the other is known from specimens from north-western Australia, Indonesia and the Philippines.

The terminology used in the descriptions follows that of Russell and Gloerfelt-Tarp (1984). Where different from the holotype, measurements for the paratypes are indicated in parentheses following the data for the holotype. Type-specimens have been deposited in the following institutions: Australian Museum, Sydney (AMS); British Museum (Natural History), London (BMNH); CSIRO Division of Fisheries Research, Hobart (CSIRO); Lembaga Oseanologi Nasional, Jakarta (LON); Northern Territory Museum, Darwin (NTM); National Museum of Natural History, Smithsonian Institution, Washington D.C. (USNM); Western Australian Museum, Perth (WAM).

SYSTEMATICS

Parascolopsis rufomaculatus sp. nov. (Figs 1, 2)

Parascolopsis sp. 1 — Sainsbury *et al.* 1985: 208, 209, 341.

Type material. HOLOTYPE - WAM P.28105-001, 153.0 mm SL, ♂, Australia,

N.W. Shelf, 18°10'S 118°16'E, FV 'Soela', bottom trawl, 276-278 m, N. Sinclair and P. Berry, 24 August 1983. PARATYPES - NTMS.11211-001, 8:83.4-110.7 mm SL, 4 ♂ and 4 ♀, Australia, Arafura Sea, N. of Melville I., 10°02'S 130°03'E-10°02'S 130°01'E, FV 'Soela', bottom trawl, CSIRO AS 5/80/58, 216 m, 8 July 1980. WAM P.25394-010, 101.0 mm SL, Australia, N.W. Shelf, off Rowley Shoals, 17°27'S 119°43'E, 'Umitaka Maru', bottom trawl, 317 m, J.B. Hutchins, 30 December 1969. WAM P.26207-003, 5:114.7-121.3 mm SL, Australia, N.W. Shelf, 15°30'S 120°58'E, FV 'Courageous,' bottom trawl, shot 0751, 280-320 m, P. Brown and party, 28 June 1978. WAM P. 28106-001, 146.3 mm SL, ♀, Australia, N.W. Shelf, 100 km S.W. of Rowley Shoals, 18°07'S 118°09'E, FV 'Soela', bottom trawl, 301-302 m, N. Sinclair and P. Berry, 24 August 1983.

Diagnosis. A species of *Parascalopsis* with the following combination of characters: pectoral-fin rays ii,13-15; pectoral fins moderately long, reaching to or just short of level of

vent; pelvic fins short, not reaching to level of vent; gill rakers on first arch 9-12; scales on top of head reaching forward to about level of middle of eye; suborbital naked; posterior and anteroventral margin of suborbital finely denticulate; lower limb of preopercle naked; bright red spot on dorsal fin between eighth and tenth spines.

Description. Dorsal rays X,9; anal rays III,7; pectoral rays ii,14 (13-14/15); lateral-line scales 36 (35-37); transverse scale rows 5/15 (4/13-5/15); gill rakers 9 (9-12).

Body moderately deep, 2.4 (2.4-2.7) in SL; head 2.8 (2.7-2.8) in SL; head shorter than body depth, depth 0.9 (0.9-1.0) in head; snout short, bluntly rounded, 3.5 (3.3-4.5) in head; eye 3.4 (2.6-3.5) in head; diameter of eye greater than or equal to snout length, 1.0 (0.7-1.0) in snout; interorbital width 1.0 (1.0-1.3) in eye; suborbital shallow, least depth 3.0 (3.0-5.1) in eye; dorsal-fin base length 1.9 (1.9-2.2) in SL; fourth through to sixth dorsal spines longest, 1.5 (1.6-1.9) times length of first dorsal spine; third through to fifth soft dorsal rays usually longest, 0.8 (0.8-1.0)

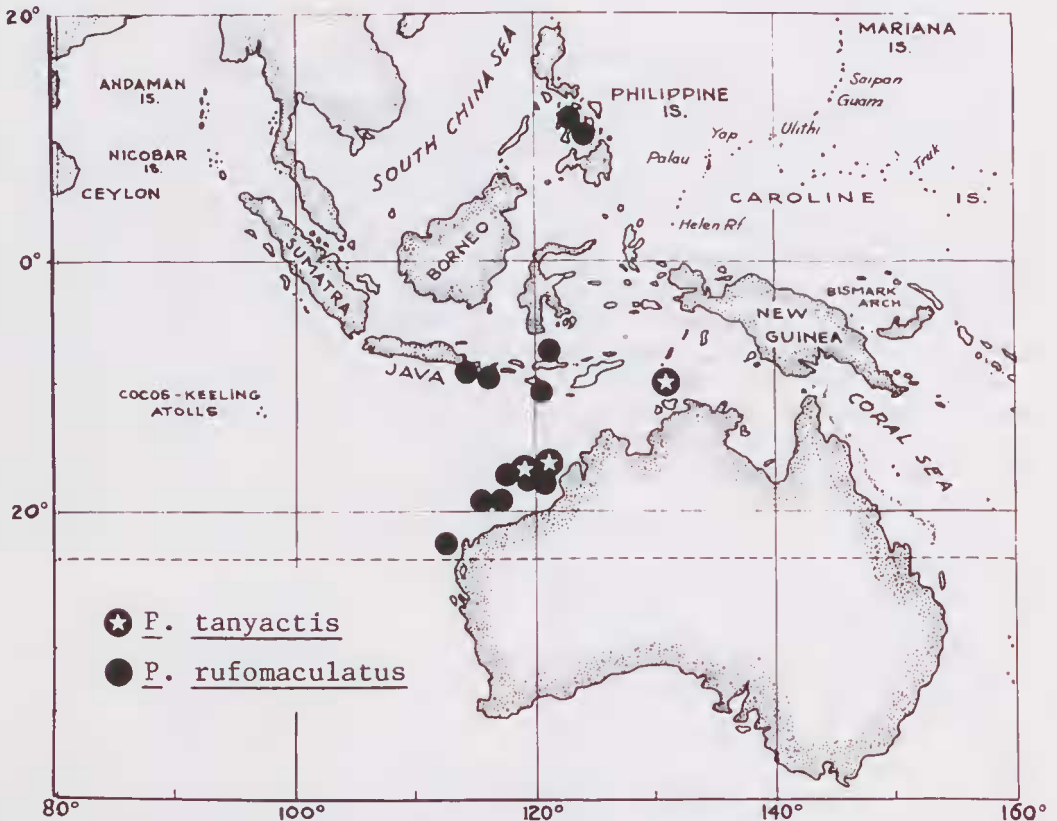


Fig. 1. Distribution map of *Parascalopsis rufomaculatus* and *P. tanyactis*.



Fig. 2. *Parascolopsis rufomaculatus* holotype, WAM P.28105-001, 153 mm SL.

times length of longest spine; anal-fin base length 6.2 (5.0-6.1) in SL; first anal spine 1.4 (1.3-1.6) in second; second anal spine 1.0 (0.9-1.1) in third; pectoral fins moderately long, reaching to or just short of level of vent, 1.4 (1.4-1.6) in head; pelvic fins short, not reaching to level of vent, 1.6 (1.6-1.9) in head; pectorals 0.9 (0.8-0.9) in pelvics.

Mouth small, maxillary reaching to or just behind anterior margin of eye; jaw teeth villiform, in narrow tapering bands in both jaws; upper jaw with about 6-8 pair of slightly enlarged, recurved teeth anteriorly. Scales on top of head extending forward between eyes to about level of middle of eye; snout naked; suborbital naked; suborbital with fine denticulations on posterior edge and on anteroventral margin; preopercle scaly, lower limb naked; posterior margin of preopercle finely denticulate; dorsal fin emarginate; caudal fin slightly forked.

Colour when fresh (from colour transparencies). Body pinkish, darker above and becoming pearly white below; broad, pale golden band below lateral line from upper margin of opercle to caudal peduncle; broad, pale pinkish midlateral band and faint golden band below this; dorsal fin with yellowish tinge; bright red spot between eighth and tenth dorsal spines; soft part of dorsal and other fins pale translucent whitish; pectoral-

fin base yellowish. This species is illustrated in colour by Sainsbury *et al.* (1985:209).

Colour in alcohol. Pale overall; silvery white midlateral band from behind opercle to caudal peduncle; thorax and abdomen silvery white; traces of silvery white on opercle; dorsal fin with traces of grey along membranous margin.

Remarks. This species is identical in colour pattern to *P. boesemani* (Manikyala Rao and Srinivasa Rao 1981), both species being characterised by a prominent red spot between the eighth and tenth dorsal spines. However, *P. rufomaculatus* differs from *P. boesemani* in having the body depth greater than or equal to head length (versus depth less than head length) and in having relatively shorter pectoral and pelvic fins (reaching to or short of level of vent, versus reaching to beyond level of vent).

P. rufomaculatus is a moderately deep-water species, trawled in depths of 210-320 m, and is known thus far only from north-western Australia.

Etymology. The specific name *rufomaculatus* is a combination of the Latin *rufus*, red, and *maculatus*, spot, in reference to the distinctive red spot on the dorsal fin of fresh specimens.

Parascolopsis tanyactis sp. nov.

(Figs 1, 3)

Parascolopsis sp. 1 — Gloerfelt-Tarp and Kailola 1984:190, 191.*Parascolopsis* sp. 2 — Sainsbury *et al.* 1985:210, 211, 341

Type Material. HOLOTYPE - WAM P.26263-001, 147.0 mm SL, ♂?, Western Australia, 250 km NNE of Larrey Point, 17°56'S 119°56'E, bottom trawl, 150-160 m, FV 'Courageous', shot 0762, D. Sheridan and party, 3 June 1978. PARATYPES - AMS I.24278-001, 92.3 mm SL, ♂, Indonesia, northern Flores I., T. Gloerfelt-Tarp, July 1981; BMNH 1984.6.25.7, 152.0 mm SL, ♀, Indonesia, Bali Strait, 8°26'S 114°29'E, bottom trawl, 71-82 m, RV 'Jurong' Cruise 16, T. Gloerfelt-Tarp, 21 August 1980; CSIRO CA2917, 193.5 mm SL, ♂, Western Australia, northwest of Port Hedland, 19°43'S 116°12'E, bottom trawl, 45-50 m, FV 'Soela', CSIRO AS 4/80/18, 16 June 1980; LON NCIP unreg., 82.0 mm SL, ♂? Indonesia, Bali, Singaraja market, 8°05'S 115°05'E, B.C. Russell, 13 April 1984; NTM S.10739-002, 142.0 mm SL, ♀, Indonesia, southern Lombok, 9°00'S 116°30'E, bottom trawl, 100-130 m, T. Gloerfelt-Tarp, July 1981; NTM S.10747-005, 154.2 mm SL, ♂, Indonesia, Sumba I., 10°30'S 120°15'E, bottom trawl, 60-80 m, T. Gloerfelt-Tarp, August 1981. NTM S.10781-001, 3:77.0-103.3 mm SL, largest a ♀, Philippines, Visayan Sea between northern Negros I. and Masbate I., southwest of Caduruan Point, 11°24'38"N 123°54'E, 98.7 m, L. Knapp and party, 7 June 1978; NTM S.11046-001, 116.2 mm SL, ♂?, Western Australia, northwest of Port Hedland, 19°40'S 116°12'E - 19°41'S 116°16'E, bottom trawl, 65-92 m, FV 'Soela', CSIRO AS 4/80/16, 1 June 1980; NTM S.11168-004, 104.4 mm SL, ♂?, Indonesia, Bali, Singaraja market, 8°05'S 115°05'E, B.C. Russell, 13 April 1984; USNM 231473, 154.0 mm SL, ♂, Philippines, Visayan Sea between northwestern Negros I. and Masbate I., southwest of Caduruan Point, 11°37'07"N 123°54'45'E, 91.4 m, L. Alcata and party, 6 June 1978; USNM 231480, 144.7 mm SL, ♂, Philippines, Samar Sea, Carigara Bay, 11°27'N 124°25'06"E - 12°07'N 124°47'36"E, C. Ferraris, April-May 1980; WAM P.26187-003, 166.0 mm SL, Western Australia, Monte Bello Is., 50 km northwest of North West

I., 19°57'S 115°13'E, bottom trawl, 150-180 m, FV 'Courageous', Shot 0673, B. Hutchins, 10 May 1978; WAM P.26212-001, 12:186.2-187.6, ♂ and ♀, Western Australia, 125 km NNW of Port Headland, 10°14'S 118°22'E, bottom trawl, 88-90 m, FV 'Courageous', shot 0698, B. Hutchins, 27 May 1978; WAM P.26888-001, 190.2 mm SL, Western Australia, off Rowley Shoals, 17°30'S 118°20'E, bottom trawl, 'Dong Bang', 1979; WAM P.26889-001, 206.0 mm SL, ♀?, Western Australia, north of Carnarvon, 23°36'S 113°18'E, bottom trawl, 'Taiyo Maru 71', M. Walker, 12 August 1979.

Diagnosis. A species of *Parascolopsis* with the following combination of characters: pectoral-fin rays ii,14-15; pectoral fins moderately long, reaching to or just short of level of vent; pelvic fins moderately long, reaching to about level of vent; gill rakers on first gill arch 8-10; scales on top of head reaching forward to or almost to anterior margin of eye; suborbital naked; suborbital usually with 1-2 tiny spines at upper corner, its margin smooth or with a few tiny spines posteriorly; lower limb of preopercle naked; greyish band across snout joining eyes through nostrils; fourth or fifth dorsal rays elongate, at least in larger specimens.

Description. Dorsal rays X,9; anal rays III,7; pectoral rays ii,14 (14-15); lateral-line scales 36 (35-38); transverse scale rows 3/10 (11-14); gill rakers 9 (8-10).

Body moderately deep, depth 3.0 (2.6-3.0) in SL; head 3.1 (2.9-3.1) in SL; head about equal to or a little less than body depth, head length 1.0 (1.0-1.2) in body depth; snout short, rounded, 3.6 (3.3-4.4) in head; eye 3.0 (2.3-3.7) in head; diameter of eye subequal to or greater than snout length, 0.8 (0.6-1.1) in snout; interorbital width 5.2 (4.3-5.4) in head; suborbital shallow, least depth 7.5 (6.4-11.6) in head; least depth of suborbital 2.5 (1.7-5.0) in eye; dorsal-fin base length 1.8 (1.8-1.9) in SL; third through to sixth dorsal spines longest, 2.1 (1.7-2.1) times length of first dorsal spine; fourth or fifth dorsal ray longest (more notably elongated in larger specimens), 1.6 (1.5-2.1) times length of longest spine; anal-fin base length 5.9 (5.5-6.4) in SL; first anal spine 1.7 (1.5-2.1) in second; second 1.0 (0.9-1.2) in third anal spine; pectoral fins moderately long, reaching to or just short of level of vent, 1.3 (1.2-1.4) in

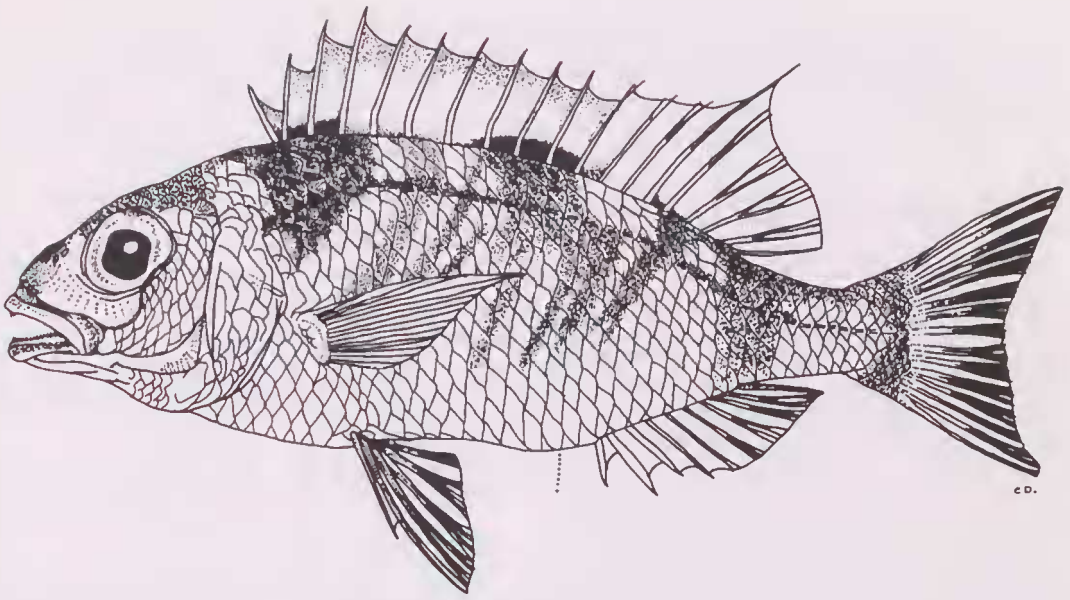


Fig. 3. *Parascolopsis tanyactis* paratype, NTM S.10747-005, 154.2 mm SL.

head; pelvic fins moderately long, reaching to about level of vent, 1.4 (1.2-1.5) in head.

Mouth moderate, maxillary reaching to below level of anterior margin of eye; jaw teeth villiform, in narrow tapering bands in both jaws; upper jaw with 3-4 pair of slightly enlarged, recurved teeth anteriorly. Scales on top of head reaching to or almost to anterior margin of eye; snout and suborbital naked; suborbital with 1-2 tiny spines (sometimes absent) at upper corner, its posterior edge smooth or with a few tiny spines; preopercle scaly, lower limb naked; posterior margin of preopercle finely denticulate; dorsal fin emarginate; caudal fin slightly forked.

Colour when fresh (from colour transparencies). Body pinkish, darker on back and paling below, becoming silvery on ventral surface; four dark pinkish brown saddles or bars on back; first saddle from nape to fifth dorsal spine and extending down to upper edge of opercle; second saddle between eighth dorsal spine and second dorsal ray, and extending down almost to ventral surface; third saddle on peduncle immediately behind dorsal fin and extending down almost to ventral surface; fourth saddle extending down base of caudal fin; interspaces between these saddles and bars with less distinct bars; pale lemon-yellow

band on either side of midventral line from base of pelvic fins to base of caudal fin; area between eyes yellowish green; snout pink; pale mauve band joining eyes through nostrils; dorsal fin pink with dusky reticulated markings; basal part of dorsal fin above three main saddles on body dark pinkish brown; pectoral fins pale pink; pelvic fins whitish, inner rays yellowish. This species is illustrated in colour by Gloerfelt-Tarp and Kailola (1984:190), and Sainsbury *et al.* (1985:211).

Colour in alcohol. Body pale brownish, with dusky oblique markings on back and sides; top of head dusky; greyish band across snout joining eyes through nostrils; base of dorsal fin with three black blotches, first between anteriormost four spines, second between last three spines and first ray, third between posteriormost five rays; fins otherwise transparent.

Remarks. This species is similar to *P. inermis* (Schlegel in Temminck and Schlegel, 1843) but differs in having a dusky band across the snout joining the eyes through the nostrils and in having the fourth or fifth dorsal ray notably elongate.

P. tanyactis is known from north-western Australia, Indonesia and the Philippines. It occurs in depths of 45-180 m.

Etymology. The specific name *tanyactis* is from the Greek *tanyo*, meaning stretched out, and *aktis*, ray, in reference to the elongate fourth or fifth dorsal ray present in adult specimens.

ACKNOWLEDGEMENTS

Thanks are due to the following people who provided specimens, photographs and other information: Guy G. Leyland (CSIRO), Patrica J. Kailola (University of Adclaide), Peter J.P. Whitehead (BMNH), Thomas Gloerfelt-Tarp (F.A.O./Jetindofish). Special thanks are due to Clinton Duffey for his illustration of *P. tanyactis*. Part of this work was undertaken during tenure of a CSIRO Postdoctoral Fellowship at the National Museum of Natural History, Smithsonian Institution, and I am grateful to Victor G. Springer for making available to me the fish collection and facilities at the USNM.

REFERENCES

- Gloerfelt-Tarp, T. and Kailola, P. 1984 *Trawled fishes of southern Indonesia and northwestern Australia*. Australian Development Assistance Bureau; Directorate General of Fisheries, Indonesia; German Agency for Technical Cooperation: Jakarta.
- Manikyala Rao, D. and Srinivasa Rao, K. 1981 A revision of the genus *Scolopsis* Cuvier (Pisces: Nemipteridae) with descriptions of two new species from Indian waters. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen*, ser. c, **84**: 131-141.
- Russell, B.C. and Gloerfelt-Tarp, T. 1984 A new species of *Parascolopsis* (Pisces: Nemipteridae) from Indonesia. *The Beagle, Occasional papers of the Northern Territory Museum of Arts and Sciences* **1**: 111-114.
- Sainsbury, K. J., Kailola, P.J. and Leyland, G.G. 1985 *Continental shelf fishes of northern and northwestern Australia. An illustrated guide*. Clouston & Hall and Peter Pownall Fisheries Information Service: Canberra.
- Temminck, C.J. and Schlegel, H. 1843 Pisces. In: P.F. von Siebold (ed) *Fauna Japonica*. Pl 2: 21-72. Lugduni Batavorum : Leyde.

Accepted 22 August 1986